

IN THE CLAIMS

Please amend Claims 1, 12, 19, as follows:

1. (TWICE-AMENDED) A method of amplifying desired regions of nucleic acid from a nucleic acid template comprising:

- Sub E1
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- (a) providing a plurality of first PCR primers, each first primer having a region of fixed nucleotide sequence identical or complementary to a consensus sequence of interest and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence;
 - (b) providing a plurality of second PCR primers, each second primer having a region of arbitrary, yet fixed nucleotide sequence and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence; and then
 - (c) amplifying the nucleic acid template via the PCR using the plurality of first PCR primers and the plurality of second PCR primers under conditions wherein a subset of the plurality first primers binds to the consensus sequence of interest substantially wherever it occurs in the template, and a subset of the plurality of second primers binds to the template at locations removed from the first primers such that DNA regions flanked by the first primer and the second primer are specifically amplified.

Sub E8

DK

12. (TWICE-AMENDED) A method of amplifying exons from a DNA template comprising:

- (a) providing a plurality of first PCR primers, each first primer having a region of fixed nucleotide sequence identical or complementary to a consensus sequence of a 3' splice region and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence;
- (b) providing a plurality of second PCR primers, each second primer having a region of fixed nucleotide sequence reversely complementary to a consensus

E2 cont
Defect
sequence of a 5' splice region and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence; and then

- (c) amplifying the DNA template via the PCR using the plurality of first PCR primers and the plurality of second PCR primers under conditions wherein a subset of the plurality first primers binds to a sequence reversely complementary to the 3' splice consensus sequence substantially wherever it occurs in the template, and a subset of the plurality of second primers binds to the 5' splice consensus sequence substantially wherever it occurs in the template, such that exons flanked by the first primer and the second primer are specifically amplified.

19. (TWICE-AMENDED) A method of amplifying regions flanking a consensus sequence in a nucleic acid template of totally or partially unknown sequence comprising:

- Sub E2*
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(a) providing a plurality of first PCR primers, each first primer having a region of fixed nucleotide sequence identical or complementary to a consensus sequence of interest and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence;
- (b) providing a plurality of second PCR primers, each second primer having a region of arbitrary, yet fixed nucleotide sequence and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence; then
- (c) amplifying the nucleic acid template via the PCR using the plurality of first PCR primers and the plurality of second PCR primers under conditions wherein a subset of the plurality first primers binds to the consensus sequence of interest substantially wherever it occurs in the template, and a subset of the plurality of second primers binds to the template at locations removed from the first primers such that DNA regions flanked by the first primer and the second primer are specifically amplified; then
- (d) incorporating the amplified nucleic acid of step (c) into a library;

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- (e) sequencing a portion of amplified nucleic acid from a particular clone from the library of step (d) and providing a third PCR primer of unique sequence which will prime PCR amplification from the sequenced portion of DNA;
- (f) providing a plurality of fourth PCR primers, each fourth primer having a region of arbitrary, yet fixed nucleotide sequence and a region of randomized nucleotide sequence located 5' to, 3' to, anywhere within, or flanking the region of fixed nucleotide sequence; and then
- (g) amplifying the nucleic acid present in the template via the PCR using the third PCR primer and the plurality of fourth PCR primers under conditions wherein the third primer binds to the sequenced portion of nucleic acid from step (e), and a subset of the plurality of fourth primers binds to the template at locations removed from the third primers such that DNA regions flanked by the third primer and the fourth primer are specifically amplified.

REMARKS

Applicant's undersigned counsel thanks Examiner Sisson for the helpful and courteous phone interview held on November 5, 2001. The telephone interview was precipitated by the Notice dated November 1, 2001, indicating that Applicant's prior response, filed August 8, 2001, while complete, was not in the proper format according to 37 CFR §1.121(c).

The above amendment is identical to the previous amendment, with the exception that the claims are submitted in clean form.

Attached hereto is a set of the amended claims only, with additions underlined and deletions bracketed. Also attached is a set of the marked up paragraphs.

The Examiner is requested to refer to Applicant's earlier submission for arguments in favor of the patentability of the invention, as well as objective scientific evidence, in the form of a Rule 132 Declaration, of the functionality of the claimed invention.